BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR A HEARING TO DETERMINE THE FAIR VALUE OF THE UTILITY PROPERTY OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON, TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN, AND FOR APPROVAL OF PURCHASED POWER CONTRACT	)))))))))	DOCKET NO. E-10345A-03-0437

DIRECT TESTIMONY

OF

STEVEN C. CARVER

ON BEHALF OF THE
STAFF OF THE ARIZONA CORPORATION COMMISSION

February 3, 2004

TABLE OF CONTENTS

DIRECT TESTIMONY OF STEVEN C. CARVER

Attachments

DIRECT TESTIMONY OF
STEVEN C. CARVER

Q. Please state your name and business address.

A. My name is Steven C. Carver. My business address is 740 NW Blue Parkway, Suite 204, Lee's Summit, Missouri 64086.

Q. What is your present occupation?

A. I am a principal in the firm Utilitech, Inc., which specializes in providing consulting services for clients who actively participate in the process surrounding the regulation of public utility companies. Our work includes the review of utility rate applications, as well as the performance of special investigations and analyses related to utility operations and ratemaking issues.

Q. On whose behalf are you appearing in this proceeding?

A. Utilitech was retained by the Staff of the Arizona Corporation Commission ("Staff" and "ACC", respectively) to review and respond to the rate case filing of Arizona Public Service Company ("APS" or "Company") and to file testimony with this Commission regarding the results of our review, primarily regarding APS' test year revenue requirement.

Q. Have you previously testified before this Commission in proceedings that involved APS?

A. No. Although I have not previously filed testimony in a proceeding involving APS, I have filed testimony and participated in a number of other rate proceedings before this Commission dating back to the late 1980's, including: US West Communications (now Quest Communications), Southwest Gas Corporation, and Citizens Utilities Company.

Q. Please summarize the purpose and content of your testimony.

A. Generally, my responsibilities in this docket encompass the review and evaluation of various elements of rate base and operating income included within the overall revenue requirement. As a result, I address one rate base adjustment (Staff Adjustment B-7) and four adjustments to operating income (Staff Adjustments C-12 through C-15). The Staff ratemaking adjustments, which I do not sponsor, are separately addressed in the direct testimony of ACC Staff witness James Dittmer or other identified Staff witnesses. The revenue requirement effect of the various Staff adjustments and recommendations are reflected within Staff's Joint Accounting Schedules, which are discussed in greater detail by Mr. Dittmer.

EDUCATION AND EXPERIENCE

Q. What is your educational background?

A. I graduated from State Fair Community College, where I received an Associate of Arts Degree with an emphasis in Accounting. I also

graduated from Central Missouri State University with a Bachelor of Science Degree in Business Administration, majoring in Accounting.

Q. Please summarize your professional experience in the field of utility regulation.

A. From 1977 to 1987, I was employed by the Missouri Public Service Commission ("MoPSC") in various professional auditing positions associated with the regulation of public utilities. In April 1983, I was promoted by the Missouri Commissioners to the position of Chief Accountant and assumed overall management and policy responsibilities for the Accounting Department. I provided guidance and assistance in the technical development of Staff issues in major rate cases and coordinated the general audit and administrative activities of the Department.

I commenced employment with the firm in June 1987. During my employment with Utilitech, I have been associated with various regulatory projects on behalf of clients in the States of Arizona, California, Florida, Hawaii, Kansas, Illinois, Iowa, Indiana, Mississippi, Missouri, Nevada, New Mexico, New York, Oklahoma, Pennsylvania, Texas, Utah, Washington, West Virginia and Wyoming. I have conducted revenue requirement and special studies involving various regulated industries (i.e., electric, gas, telephone and water). Since joining the firm, I have also appeared as an expert witness before the MoPSC on behalf of various clients, including

the Commission Staff. Additional information regarding my educational background, professional experience and qualifications are summarized in Attachments SCC-1 and SCC-2.

EXECUTIVE SUMMARY

Q. Please describe Staff's approach to quantifying revenue requirement in this proceeding.

A. Staff's Joint Accounting Schedules use APS' "prefiled" jurisdictional amounts (including Company pro forma adjustments) for rate base, revenues and expenses as a starting point. The Company's proposed amounts were then further adjusted to reflect the impact of the various modifications recommended by Mr. Dittmer, other Staff witnesses and myself.

By starting with the Company's adjusted "prefiled" jurisdictional amounts, each ratemaking adjustment recommended by Staff represents a reconciling difference, positive or negative, between the overall revenue requirement recommendations of Staff and APS.

Q. How will you identify and refer to the individual accounting adjustments that you sponsor?

A. Both rate base and operating income adjustments have been numbered sequentially, but separately, beginning with the number "one". In order to

distinguish the first rate base adjustment from the first operating income adjustment, the adjustment number is preceded by a reference to the schedule on which the adjustment was posted. For example, the posting schedule for the rate base adjustments is Schedule B. So, the first rate base adjustment would then be referenced as Schedule (or Adjustment) B-1. Similarly, the first operating income adjustment would be identified as Schedule (or Adjustment) C-1, since Schedule C is the posting schedule for the income statement adjustments. For purposes of testimony presentation in this proceeding, Mr. Dittmer and I may use the words "schedule" and "adjustment" interchangeably when referring to the individual ratemaking adjustments proposed by Staff.

Q. Do the Joint Accounting Schedules provide calculation detail supporting each Staff adjustment?

A. Yes. The Joint Accounting Schedules contain individual adjustment "schedules" that show the quantification of each rate base and operating income adjustment, with footnote references to supporting documentation. Since virtually all information relied upon by Staff in developing these adjustments was supplied by APS in response to written discovery, the adjustment schedules refer to the relevant data sources, already in the Company's possession, that represent the primary support for the Staff adjustments affecting overall revenue requirement. Due to the detailed calculations required to support certain Staff adjustments, additional

workpapers or spreadsheet files may have been created in support of certain adjustments.

Q. Please describe how the remainder of your testimony is organized.

A. The remainder of my testimony is arranged by topical section, following the Table of Contents presented previously. This Table identifies the specific areas I address in testimony and references the testimony pages as well as any related adjustment support located in the Joint Accounting Schedules.

CASH WORKING CAPITAL

Q. Please describe Staff Adjustment B-7.

A. Staff Adjustment B-7 reduces rate base to reflect the proper recognition of Cash Working Capital ("CWC") as a source of ratepayer supplied "zero" cost capital, using methodologies consistent with prior ACC decisions.

Q. Has APS proposed a rate base allowance for CWC?

A. Yes. As discussed in the direct testimony of Company witness Laura L. Rockenberger,[1] APS has prepared a lead lag study for its Arizona retail operations for purposes of quantifying CWC in the instant proceeding.

[1] Direct testimony of Company witness Rockenberger, pages 9-14.

Referring to Ms. Rockenberger's Attachment LLR-2, APS has proposed a CWC allowance of $54.1 million, as summarized in the following table:[2]

Description	Working Capital Requirement (Source)
Cash Required For (Provided By) Operating Expenses	$(20,969,724)
Non Rate-Based Elements of Rate-Based Components	74,809,380
Special Deposits and Working Funds	258,266
Net Cash Working Capital Required For (Provided By) Operations	$54,097,922

Source: Rockenberger Direct, Attachment LLR-2.

Q. Could you explain the reference in this table to "Non Rate-Based Elements of Rate-Based Components"?

A. As indicated in Company's response to Staff Data Request No. UTI-3-142, the CWC item identified as "Non Rate-Based Elements of Rate-Based Components" represents APS' proposal to include "non-cash" items in the rate base allowance for CWC.

Q. In quantifying this $54.1 million CWC allowance, did APS employ a methodology that was consistent with the longstanding approach used by this Commission as applied in the Company's last rate case?

A. No. In describing the $54.1 million rate base allowance, Ms. Rockenberger's direct testimony states:

> "Second, my testimony explains the Cash Working Capital component of APS' Allowance for Working Capital (SFR Schedule B-5, Line 1) which was calculated following the lead/lag study method required by the Commission in Decision No. 55931 (April 1, 1988)."
> [Rockenberger Direct, p. 2-3]

[2] APS' proposed $54.1 million net CWC allowance is before jurisdictional separations.

In describing the context of this Company testimony, APS' response to Staff Data Request No. UTI-3-142(c) states:

> "The intent of the cited portion of the testimony was to state that the that [sic] both the $(20,969,724) and the $74,809,380 amounts were calculated using a lead-lag study methodology, as opposed to the 'formula' method or other 'rule of thumb' approach. Decision No. 55931 (at pages 66-67) cited a prior Commission decision for the proposition that cash working capital could be held at zero in the absence of a lead-lag study. However, because there is no administrative rule on what a lead-lag study must (or must not) contain, APS does not believe that Decision No. 55931, precludes APS from presenting a lead-lag study that accurately presents the economic impact of the lag in cash collection of costs that have current rate base impact."

Contrary to the representation set forth in direct testimony, APS' proposed lead lag study approach goes far beyond the Commission's longstanding lead lag study methodology, as addressed within Decision No. 55931, and materially misstates the rate base allowance for CWC by including non-cash items.

Q. In quantifying Staff Adjustment B-7, was it necessary for Staff to prepare a lead lag study from "scratch" in order to correctly quantify this component of rate base?

A. No. Cash Working Capital ("CWC") is a complex, labor intensive valuation issue that requires detailed specialized analysis within general

rate case proceedings. Since a regulated entity does not record CWC in its accounting records, the CWC amounts included in rate base must be quantified through a specialized study. Significant resources are required to properly prepare, maintain and review detailed lead lag studies. In lieu of preparing an independent study, Staff resources were applied in the instant proceeding to analyze, test and correct the lead lag study sponsored by APS.

Q. Could you summarize the specific changes and corrections you have proposed with respect to APS' valuation of the CWC allowance?

A. Yes. I recommend that the following changes and/ or corrections be reflected in the Company's lead lag study to more accurately quantify the cash working capital needs of APS in conformance with the Commission's CWC policies, as expressed in prior rate orders:

- Remove non-cash, accrued expense items (e.g., depreciation and amortization expenses, pension and OPEB accruals, deferred income tax expenses, etc.) so that the study results are based on "cash" expenses;

- Recognize cash interest expense and the extended (i.e., quarterly, semiannually, etc.) interest payment patterns in the lead lag study;

- Reflect pro forma ratemaking interest expense and per book current income tax expense directly related to the 2002 test year in quantifying the CWC allowance; and

- Incorporate the following miscellaneous corrections identified during Staff's analysis of the APS study workpapers and supporting documentation:

- o Revenue lag: employ average daily accounts receivable balances, rather than only month-end balances, in quantifying collection lag; and correct exclusion of transmission lag from calculation of the composite revenue lag.

- o Coal expense lag: correct Cholla coal receipt dates; eliminate "minus 1" lag day technique for Cholla coal and coal freight; and replace Four Corners lag day input errors.

- o Fuel Oil: correct lag day input errors and payment dates.

- o Materials & Supplies and Other: correct expense lag calculation for certain corporate credit card transactions included in the lead lag study.

- o Pension & OPEB: revise test year expense amount to reflect actual expense level per response to Staff Data Request No. UTI-16-329.

- o Sales Taxes: recognize net lag between collection and remittance of Arizona sales taxes.

After removing the non-cash items, recognizing the interest expense lag and posting the other corrections to the APS lead lag study, Staff Adjustment B-7 results in a negative CWC allowance which should be used to reduce rate base.

Q. Could you summarize the primary differences in the CWC between Company and Staff?

A. Yes. While I have not attempted to account for each dollar difference in rate base, the following table provides a general summary of the primary CWC quantification issues:

		Approximate CWC Issue Value[3]
APS Recommendation	(a)	$53.8 million
Remove Non-Cash Items		(74.8) million
Recognize Interest Expense		(14.1) million
Correct Current Income Tax Expense		(11.2) million
Recognize Arizona Sales Taxes	(b)	(7.1) million
Revise Revenue Lag		(4.9) million
Other Unreconciled Items		(.8) million
Staff Proposed CWC Allowance	(c)	$(59.1) million

Note (a): Rockenberger Attachment LLR-2.
Note (b): Estimate based on Rockenberger Attachment LLR-3.
Note (c): Staff Adjustment B-7.

Q. Why is it appropriate for the lead lag study methodology to produce a negative allowance that reduces rate base?

A. A "negative" CWC valuation reducing rate base is appropriate for several reasons. First, a negative amount indicates that, on average, the Company collects electric sales revenues from ratepayers prior to the need to disburse cash to pay expenses. Consequently, the Company has the advance use of ratepayer-provided funds for which ratepayers should be compensated through negative cash working capital.

Second, it has been my experience that a properly prepared lead lag study often results in a "negative" value for CWC. This result should neither be surprising nor problematic in adjusting rate base. Just as the Company collects customer advances, deferred income taxes and

accumulated depreciation funds from ratepayers, which are used to reduce rate base (i.e., recognized as zero-cost capital), so too is it relatively common for a utility to collect operational cash flows from ratepayers in advance of the disbursement of those funds to pay expenses. If a lead lag study shows that CWC is a "negative" amount, it is reasonable and appropriate to reduce rate base accordingly.

Third, by definition, a fully developed and properly prepared lead lag study is not limited to producing a "zero" or positive rate base allowance. Consistent with this Commission's longstanding practice and procedure, it is possible and appropriate for CWC to yield a significant reduction to rate base, when circumstances warrant.

Overview of Cash Working Capital

Q. What is cash working capital and why should it be included in rate base?

A. Cash working capital is commonly defined as the amount of cash needed by a utility to pay its day-to-day expenses incurred in providing service in relation to the timing of the collection of revenues for those services. In applying this definition, if the timing of a company's cash expenditures, in the aggregate, precedes the cash recovery of those expenses, investors must provide cash working capital. On the other hand, ratepayers are considered the providers of cash working capital in instances where their

[3] Amounts shown are before jurisdictional separations.

remittances, on the average, precede the company's cash disbursements for expenses. Whether “positive” or “negative” in amount, cash working capital is typically included in utility rate base to recognize the timing of cash flows through the utility.

Q. In your opinion, how should cash working capital be quantified for inclusion in rate base?

A. In my opinion, sample-based lead lag studies represent the best available method for quantifying the revenue and expense component lags that are used in determining cash working capital. Although it may not be feasible to completely update such studies when a utility routinely seeks an annual rate increase, due to the complex and detailed nature of such an undertaking, major components of the lead lag study should be updated periodically to ensure that the revenue and expense lag calculations reasonably represent current operational conditions and reflect the effects of recent changes in corporate policies as well as organizational structure.

The lead lag study prepared by APS is based on relatively recent transaction detail from the calendar 2002 test year. However, instead of a sample-based approach, the APS lead lag study has relied on various measurement techniques, including: the evaluation of all accounting transactions in pre-selected months of 2002 (3-months for “materials & supplies,” 11-months for “other”); analyses of established payment

processes and patterns (revenues, payroll, income taxes, etc.); and comparison of data contained in computer system data base files to calculate expense lag days for individual transactions (e.g., materials & supplies, other, etc.).

Staff's evaluation of the Company's lead lag study results included the careful review of data inputs and computational formulae within multiple lag day spreadsheet study files prepared by Company personnel as well as judgmental sampling techniques to obtain transaction source documentation to verify and/ or identify necessary corrections to APS' lag day calculations.

Q. You have previously referred to use of a "lead lag study" to quantify CWC. Please explain that reference.

A. A number of years ago, it was fairly common for regulators to estimate a "provision" for the amount of CWC includable in rate base using an arbitrary "formula" method. The most common method was referred to as the 45-day, or 1/8th of O&M, formula. Until the mid-1970's, regulators generally used such a formula method, as modified from time to time to include or exclude certain items from the formula calculation. Since the mid-1970's, it has been fairly common for regulators to rely on actual measurements of cash flows using detailed lead lag studies to quantify the rate base allowance for CWC.

A lead lag study represents a systematic measurement of the timing of cash flows through a utility. Specific calculations are made of the number of days between the provision of service to customers and the collection of related cash revenues for those services. The timing of cash outflows for the major cash expense elements comprising cost of service are also measured to determine the average number of days between the Company's receipt of goods or services supplied by vendors/ contractors and the ultimate cash payment for such items.

If more "lag days" on average are involved in the collection of revenues from ratepayers than are available to a utility in the delayed payment of expenses after the related goods and/ or services are received, investors are considered to provide the necessary cash working capital to bridge this gap between payment and collection, and an addition to rate base is appropriate. On the other hand if cash disbursements are sufficiently delayed, or revenue collections are accelerated, so that the average expense lag days exceed the revenue lag days, ratepayers are considered to be the providers of cash working capital, and a reduction from rate base is appropriate.

Q. Earlier, you defined cash working capital. What is the significance of that definition?

A. The definition of cash working capital is significant in the identification of the particular investment amounts that are includable in the determination of rate base. This definition leads to, or implies, the establishment of certain boundaries as to which cash flows are relevant for ratemaking purposes, thereby defining the scope of the lead lag study.

Q. Please identify the major cash flows of a typical public utility, indicating which cash flows are relevant to the measurement of utility cash working capital requirements.

A. The major sources and uses of cash are observable in a utility's statement of cash flows, or its equivalent, as follows:

Sources of cash for a utility ordinarily include:

- Operating revenues.
- Non-operating and non-jurisdictional revenues.
- Proceeds from outside financings or debt/ equity infusions from parent.
- Asset sales.

Uses of utility cash include:

- Payment of utility expenses.
- Utility plant construction expenditures.
- Payment of non-operating or non-jurisdictional expenses.
- Net change in other assets (inventory, cash, prepayments).
- Retirement of debt or equity.

Given the definition of cash working capital discussed previously (i.e., "the amount of cash needed by a utility to pay its day-to-day expenses . . ."), cash flow timing and measurement is focused solely on the first cash "source" and the first cash "use" listed above. All other sources and uses are either separately considered in the ratemaking process or are

non-operational, financing or investing functions – not transactions related to the day-to-day payment of operating expenses. It is also important to note that some operating revenues represent a utility's recovery of recorded non-cash expenses, such as depreciation and deferred tax expense. These accrued expenses are properly included in determining overall revenue requirements, but do not require the current expenditure of cash. Consequently, these "non-cash" expenses fall outside the scope of a properly prepared lead/lag study.

Corrections / Modifications to APS Study

Q. Have you reviewed the Company's lead lag study workpapers and identified any specific corrections which should be recognized therein?

A. Yes. I have systematically reviewed the Company's lead lag study workpapers and supporting calculations. This work did not verify the accuracy of the Company's transaction data (i.e., receipt dates, payment dates, payment amounts, etc.) underlying each of the thousands of transactions contained in the multiple worksheets supporting APS' study results. Instead, Staff's review was focused on the analysis, testing and correction of the most important lead lag study elements sponsored by APS, including reliance on judgmental sampling techniques to obtain transaction source documentation. As a result of this effort, specific corrections to the Company's study have been identified. The following

table briefly summarizes the corrections, which have been reflected in the CWC calculation set forth in Staff Adjustment B-7:

Item	Correction
Expense Levels:	Include cash pro forma interest expense; remove out-of-period transactions from 2002 current income tax expense; and revise Pension & OPEB expense to actual test year level.
Revenue lag:	*[Staff 40.13 days vs. APS 41.81 days]* • Modify the CIS revenue collection lag (based on turnover ratio) to reflect average daily accounts receivable balances, rather than calendar month-end balances. • Correct APS' unintended assignment of a "zero" revenue lag to transmission revenues.
Coal expense lag:	*[Staff 31.63 days vs. APS 30.86 days]* • Correct Cholla coal delivery dates for twenty-two transactions included in the APS lead lag study to correspond with actual dates contained in Cholla coal freight study, consistent with the response to Staff Data Request No. UTI-11-276. • In quantifying Cholla coal and coal freight transaction payment lags, APS compared payment date with receipt date then deducted "1" (i.e., net lag "minus 1"). APS study formulae were modified to remove the "minus 1" from the expense lag. • Correct Four Corners coal lag to replace input lag days with lag day formula to reflect average receipt date at mid-point of prior month.
Fuel Oil:	*[Staff 28.51 days vs. APS 27.40 days]* • Correct APS-Oil input error: transaction lag input as 130.5 days, but should have been 116.5 days. • Navajo-Oil: APS calculated lag days by inputting time lapse, rather than computing lag days via spreadsheet cell formulae. The input lag days used payment date other than the actual date listed in APS spreadsheet file. Corrected calculation for three transactions to reflect actual payment date.
M&S and Other:	*[Staff 30.29 days vs. APS 29.34 days]* • Correct corporate credit card expense lag to recognize additional 15.21 days attributable to monthly arrearage billing.
Sales Taxes:	Recognize net lag between collection and remittance of Arizona sales taxes.

Q. In quantifying its proposed CWC allowance, did APS include pro forma levels of expense in the lead lag study?

A. No. In quantifying its proposed rate base allowance for CWC, APS included actual, per books unadjusted test year expenses.[4] Generally, the use of unadjusted test year expenses for CWC quantification purposes can be considered reasonable, absent material ratemaking adjustments to the various expense components reflected in the study. However, referring to APS Schedule C-1, the Company has proposed ratemaking adjustments that increase O&M expense by $120.2 million on a total Company basis (or $101.0 million on an ACC jurisdictional basis).

During the test year, APS also recorded negative current income tax expense and has proposed to further decrease test year "total" income tax expense for the impact of its various pro forma adjustments to taxable income – excluding the $66 million pro forma effect of the Company's requested rate increase on current income tax expense.[5] The magnitude of these items suggest potentially large shifts in the "weighting" of lag days that may warrant use of pro forma, rather than unadjusted, test year expense amounts.

[4] Total Company unadjusted, per book expenses per APS Schedule C-1, column (a) ties to Rockenberger Attachment LLR-3, column (1). Also, see APS response to Staff Data Request No. UTI-12-284.

Q. Given the reality of quite large ratemaking adjustments to test year actual expenses levels, what amounts should be included in the APS lead lag study?

A. When feasible and significant to the outcome, material ratemaking adjustments to test year expense levels should be recognized in the lead lag study results, in order to ensure that the CWC rate base allowance is not materially misstated due to inconsistencies between actual and pro forma test year expense levels.

Q. Does Staff Adjustment B-7 fully reflect the net effect of the pro forma adjustments proposed by the Company and Staff?

A. No. While the Company has proposed ratemaking adjustments increasing jurisdictional O&M expense by about $101 million, Staff Schedule C (page 1) summarizes the various adjustments proposed by Staff that offset a large portion of the Company's proposed increase by reducing jurisdictional O&M expense in excess of $60 million. Because of the diverse ratemaking recommendations of the parties in this proceeding, I have adopted APS' proposed use of per book expense levels for CWC valuation purposes – except for current income tax expense and interest expense. When readily identifiable and material in amount, Staff recommends that it is appropriate for a lead lag study to recognize pro forma expense levels in quantifying the rate base allowance for CWC.

[5] APS Schedule A-1 (ACC Jurisdictional): Increase in Base Revenue Requirements $166,807,000 less

Q. Are there any lead lag study components where Staff has not used test year per book expense for CWC purposes?

A. Yes. Staff has proposed to revise the expense levels for two lead lag study components where reliance on "per book" expense levels would yield distorted results. During the test year, APS recorded "negative" current income tax expense due, in large part, to a change in accounting method on the 2001 income tax return, but first reflected in the Company's 2002 financial statements. This change in accounting method caused a material shift between current and deferred income tax expense in the 2002 test year, which should not be allowed to materially impact CWC.[6]

In response to Staff Data Request No. UTI-14-315, APS provided additional information allowing Staff to determine the amount of current income tax expense related to 2002 operating results, excluding the impact of the correcting entries recorded in 2002 for the 2001 change in accounting method. Staff recommends rejection of the "negative" current income tax expense recorded in 2002 for lead lag study purposes, instead recognizing the current income taxes actually related to test year operating results.

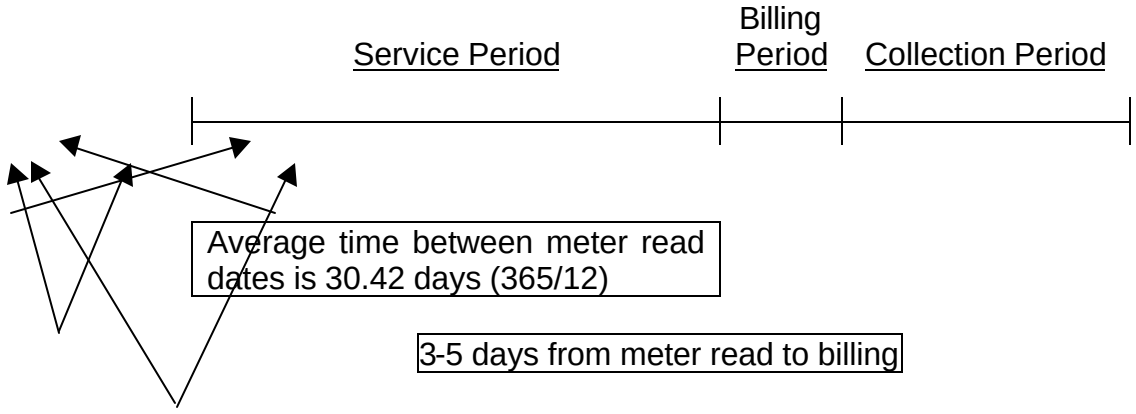
Operating Income Deficiency $100,918,000 equals $65,889,000 of additional current Federal and State income tax expense.

[6] See APS response to Staff Data Request No. UTI-14-314.

In addition, Staff has proposed inclusion of interest expense in the lead lag study, contrary to APS' proposed exclusion. For ratemaking purposes, Staff's CWC allowance recognizes the amount of pro forma interest expense resulting from Staff's interest synchronization adjustment set forth on Staff Schedule C-19, in lieu of the actual amount of interest expense recorded by APS during the test year.

Q. Please explain how the revenue lag is employed in a lead lag study.

A. As mentioned earlier, a lead lag study is a means of measuring cash flows through the utility. In other words: Does the company, on average, collect revenues from its customers before or after it is required to disburse cash in payment of the goods and services consumed in support of its day to day operations? In answering this question, it is necessary to quantify the revenue lag, which is the average time lapse between the provision of utility service to customers and the collection of the related revenues. The following chart summarizes the components of the revenue lag, using hypothetical billing and collection lags:



20 days from billing to collection

Assuming utility service is provided to customers evenly throughout the service period, the follow table illustrates the components comprising the typical revenue lag, using hypothetical values:

Description	Days
Service Lag (1/2 the service period)	15.21
Billing Lag	5.00
Collection Lag	20.00
Revenue Lag	40.21

The revenue lag (i.e., 40.21 days in this example) is then compared to the expense lag quantified for each cash expense component (e.g., coal expense, payroll expense, etc.) of the lead lag study, as appears on Staff Adjustment Schedule B-7.

Q. Please explain how the collection lag element of the revenue lag is estimated in the Company's lead lag study.

A. Rather than conducting a detailed, sample-based analysis of actual customer bill payment patterns, APS employed an accounting technique generally referred to as the accounts receivable turnover ratio to quantify the collection lag. In essence, this turnover ratio estimates how many days-worth of average daily revenues are in the accounts receivable balance, using the following algorithm:

Average Accounts Receivable Balance $ /
(Annual Revenue $ / 365 Days)

APS modified this formula for each test year month, as follows:

Month-End Accounts Receivable Balance $ /
(Monthly Revenue $ / # Days in Month)

Accurate application of the accounts receivable turnover ratio is highly dependent upon the reasonable quantification of average accounts receivable balances throughout each of the 365 days of the year. Thus, an average daily balance is required to calculate reliable results.

Q. How does APS' use of month-end accounts receivable balances, rather than average daily balances, affect the collection lag calculation?

A. Because utilities typically read customer meters on a billing cycle basis (i.e., about 20 billing cycles in a calendar month), it is relatively common for month-end accounts receivable balances to not be representative of the average daily outstanding receivable balances recorded by the utility throughout any given month. In quantifying the revenue collection lag, APS relied only upon month-end accounts receivable balances, which resulted in a collection lag of 22.21 days. In lieu of the month-end balances, Staff recalculated the collection lag based on the average daily accounts receivable balance from information supplied by APS.[7] Staff's calculation is more detailed, incorporating daily balances in place of the twelve month-end data points APS assumed were representative of actual accounts receivables throughout the year.

[7] See APS response to Staff Data Request Nos. UTI-4-155 and UTI-15-323.

Staff's calculation revealed that APS' average daily accounts receivable balances are significantly less than the month-end balances, which results in a lower collection lag of 19.93 days – about 2.3 days shorter than APS' collection lag calculation.

Q. Do you have any comments or observations regarding APS' collection lag?

A. Yes. While a turnover ratio only provides an estimate of the time lapse between rendering customer bills and the utility's collection of related customer payments, it is interesting to observe that the average collection lag estimates of both APS (22.21 days) and Staff (19.93 days) appear to indicate that a significant majority of the Company's customer billings are delinquent on a recurring basis.

According to APS' standard offer tariffs:

> All bills rendered by the Company are due and payable no later than fifteen (15) days from the billing date. Any payment not received within this time frame shall be considered delinquent. … All delinquent charges will be subject to a late charge at the rate of eighteen percent (18%) per annum.[8]

The CWC collection lags quantified by both Company and Staff yield average lag day estimates that significantly exceed the 15-day

[8] APS Schedule 1, Terms and Conditions for Standard Offer and Direct Access Service, Par. 4.2.1.

delinquency provision of APS' existing tariffs. Therefore, one would reasonably expect the Company's late payment charges, assessed at an annual rate of 18%, to generate significant late payment fee revenues due to what would appear to be a prevalence of delinquent customer payments. However, a review of APS' 2002 FERC Form 1 indicates that the Company recorded about $6.1 million of late payment fees during the test year. As indicated by the following calculation, it would appear that this level of actual test year late payment fees were assessed, on average, on only 22% of the Company's 2002 retail revenues. In other words, only 22% of APS' 2002 revenues were considered delinquent and resulted in late payment fee revenues, even though collection lag calculations imply much higher levels of delinquent remittances:

	Amount
2002 Forfeited Discounts (A/C 450)	$6,137,618
Divide: Monthly Late Fee Rate (18% / 12 months)	1.5%
Revenues Subject to Late Fees	$409,174,533
Divide: Sales to Ultimate Customers	1,852,149,140
% Annual Revenues Considered Delinquent	22.09%

Source: APS 2002 FERC Form 1, p.300.

Q. What do you conclude from this information?

A. Based on this data, it would appear that APS has either failed to consistently apply its late payment fee tariff (i.e., in that only 22% of sales to ultimate customers are treated as delinquent) and fully collect all delinquency fees otherwise due from its customers or the turnover ratio methodology tends to materially overstate the revenue collection lag (i.e.,

ranging from Staff 19.93 days to APS 22.21 days). I assume that APS is fully complying with all terms and conditions of its filed tariffs and Commission rules, such that forfeited discount revenues are not understated during the test year. Instead, it would appear that the collection lag used in the lead lag study, even using Staff's corrected 19.93 day lag, are conservatively overstated (i.e., longer than actually occurs) which translates into a higher rate base allowance for cash working capital than would otherwise be supportable.

Q. Have you inquired about the efforts undertaken by the Company to reduce its revenue collection lag?

A. Yes. Staff Data Request No. UTI-4-154 specifically asked the Company to identify and describe all efforts during the past five years to reduce the revenue collection lag. A portion of this response directly discussed the collection lag and late payment fees, as follows:

> APS' efforts to reduce collection lag are to a large extent constrained by the ACC's rules, which require certain minimum periods from customer billing to payment. In September of 2000, we began, again, assessing a late fee when unpaid charges became delinquent, 25 days after billing. The late fee allowed is 18% per annum, or 1.5% monthly on the delinquent charges.
> [Emphasis Added]

In light of the apparent conflict between the 15-day delinquency period included in APS' tariff and the reference to 25-days in the response to Staff Data Request No. UTI-4-154, I reviewed the Arizona Administrative

Code accessible through the internet.[9] According to Title 14, Chapter 2, R14-2-210(C)(1):

> All bills for utility services are due and payable no later than 15 days from the date of the bill. Any payment not received within this time-frame shall be considered delinquent and could incur a late payment charge.

While the above quote from the Arizona Administrative Code is permissive, in the use of the word "could", the APS tariff language cited earlier is clear that delinquent charges "will" be subject to late fees.

Q. In describing the various corrections and modifications Staff has proposed to the Company's lead lag study, you referred to the elimination of "minus 1" from APS' calculation of the coal and coal freight expense lags. Could you describe why that correction was necessary?

A. Yes. APS' lead lag study workpapers contain narrative "documentation" describing the Company's approach to quantifying the revenue or expense lag days for each study component. According to Company workpapers, the "minus 1" quantification technique is designed to exclude the date of payment from the calculation of the expense lag.[10] This quantification technique is flawed, as it fails to capture the entire benefit period from the date of receipt of particular goods or services and the Company's related payment.

[9] http://www.sosaz.com/public_services/Title_14/14-02.pdf

For example, assume the Company received a coal shipment on the first day of the month (e.g., January 1) and paid for that shipment the next day (e.g., January 2). Under this example, the Company would have the benefit of the coal for one day before remitting payment. However, the Company's "minus 1" technique would assign a zero expense lag[11] to that transaction, thereby understating the expense lag and overstating the amount of CWC includable in rate base. Staff has attempted to eliminate this "minus 1" technique from all components of the Company's lead lag study.

Q. Did APS employ the "minus 1" technique for all coal and coal freight transactions as well as for other fuel and non-fuel lead lag study components?

A. No. A review of the Company's lead lag study workpapers indicates that this technique was only applied in quantifying the Cholla coal and coal freight expense lags. If APS has used the "minus 1" technique in other fuel or non-fuel components of its lead lag study, it is not apprarent from Staff's review of the Company's expense lag calculations.

[10] APS LLR_WP2 workpaper are composed of 400 printed pages. For example, see LLR_WP2 54/400 for the discussion of Cholla Coal and Freight Procedures, including a reference to the "minus 1" quantification technique.

[11] Step 1: January 2 minus January 1 = 1 day lag. Step 2: 1 day lag "minus 1" = 0 day lag.

Q. Did you inquire about the Company's use of this "minus 1" technique?

A. Yes. In response to an informal Staff inquiry as to why the Company used this quantification technique, APS simply stated: "Somewhat different techniques were used and documented in preparing the lag days for different payment groups." While it is true that different approaches are used to quantify the expense lag for various expense components (e.g., coal, payroll, income taxes, etc.), the Company's informal response does not provide any basis to support a conclusion that the "minus 1" technique is appropriate for the Cholla coal and coal freight components.

Q. You previously referred to certain revisions to APS' coal expense lags, other than the "minus 1" problem. Could you briefly explain the bases for those revisions?

A. Yes. During our review of APS' Cholla coal and coal freight expense lag calculations, the Company provided copies of sample invoice documentation for purposes of testing the delivery dates used in the lead lag study. Upon detailed review of this information, certain discrepancies were observed between the delivery dates used in the Cholla coal calculations and those used for Cholla coal freight. In other words, the coal freight portion of the lead lag study employed delivery dates that were consistently earlier than the delivery dates used for the same coal in computing the coal expense lag. In response to Staff Data Request No.

UTI-11-276, APS confirmed that the correct dates were those used in the coal freight study component. Staff modified the Company's Cholla coal lag to recognize the proper delivery dates.

In addition, APS' Four Corners coal lag calculation was based on input lag days, rather than cell formulae that calculated the difference between the coal receipt dates and payment dates set forth in Company workpapers. Staff's proposed coal expense lag also modified these inputs to be consistent with the actual payment dates contained in the APS study.

Q. You also briefly described certain corrections to APS' input of fuel oil expense lags. Is the reason for Staff's corrections in this area similar to the explanation of the Four Corners coal lag?

A. Yes.

Q. Why was it necessary for Staff to correct the corporate credit card expense lag?

A. Staff's review of APS' lead lag study workpapers identified extremely short expense lags (e.g., 9 days) attributed to cash payment transactions involving corporate credit cards. Since credit card accounts are typically billed in arrears and the charges to such accounts were material to the materials and supplies cash expense component of APS' lead lag study, Staff Data Request No. UTI-12-290 was submitted to assess whether and

to what extent the Company's relatively short expense lag fully captured the average time lapse between receipt of the underlying goods and/ or services and ultimate payment thereof. The Company's response to this discovery request basically indicated that the credit card expense lags used in the study incorrectly used the invoice date as a proxy for the date the goods and services were received. As a result, the Company concurred that the expense lag for these transactions were understated and should be increased by about 15.21 days – the time between the mid-point of the month and the invoice date.

Q. Please describe Staff's modification to the Company's lead lag study to recognize the net lag associated with the collection and remittance of Arizona sales taxes.

A. In response to Staff Data Request No. UTI-17-331,[12] APS described its accounting for sales taxes collected from ratepayers and remitted to taxing authorities. During 2002, APS paid approximately $128 million in state and local privilege taxes on retail sales to utility customers.

According to this same discovery response, APS becomes responsible for paying the sales taxes upon customer billing and remits any tax due the taxing authorities by the 25th day of the month following customer billing. Recognizing that APS employs a cycle billing process, the sales tax

[12] See Attachment SCC-6 appended hereto.

expense lag proposed by Staff represents the sum of one-half the billing period (i.e., 15.21 days) plus the additional 25 days until remittance is due, for a total expense lag of 40.21 days.

Q. For lead lag study purposes, did Staff apply the full 40.13 day revenue lag in quantifying the sales tax impact on CWC?

A. No. As indicated previously, sales taxes are due on the 25th day of the month following customer "billing". At the time a customer is actually billed, it does not take 40.13 days for the Company to collect the revenues billed, including sales taxes, from its customers. Instead, Staff's proposed collection lag of 19.93 days represents the average time between customer billing and collection. Consequently, the 19.93 day collection lag is the appropriate revenue lag to be used in computing the net lag associated with sales taxes.

Q. Referring to Staff Adjustment B-7, what is the amount of the sales tax expense used in Staff's calculation of CWC?

A. For this element of the lead lag study, Staff used $127,980,680 of sales taxes (before jurisdictional allocation) charged to FERC Account 408.1 during the test year.[13] Staff's proposed treatment of sales taxes for CWC purposes has the effect of reducing rate base by approximately $7 million, as set forth on Staff Adjustment B-7.

[13] See APS 2002 FERC Form 1, pages 262-263.

Q. Are there alternative approaches that could have been used to quantify the rate base offset for sales taxes in lieu Staff's proposed CWC treatment?

A. Yes. Referring to Attachment SCC-6, the response to Staff Data Request No. UTI-17-331 provided the month-end balance in the sales tax liability account from January 2002 through November 2003. During this time period, APS' sales tax liability ranged from $5,496,542 to $13,887,315, with a monthly average in excess of $8 million.

Q. Do you have any further comments regarding APS' lead lag study calculations?

A. Yes. Staff's efforts in quantifying the sales tax lag included a review of the other taxes (i.e., taxes other than income taxes) detail set forth on pages 262-263 of APS' 2002 FERC Form 1. During this review, it was noted that the Company's lead lag study appears to have recognized the net lag associated with the employees' share of payroll tax withholdings, but overlooked the employer's share of such taxes (e.g., FICA and Medicare). Absent information to confirm and finalize a correction to APS' lead lag study, Staff has raised the concern for Company review and discussion in its rebuttal filing.

CWC and Non-Cash Items

Q. Would you briefly explain your proposal to eliminate non-cash items from the lead lag study?

A. The most significant lead lag methodology difference in this proceeding relates to the Staff's removal of non-cash expenses (e.g., depreciation, amortization, deferred taxes, etc.) that APS improperly included in its lead lag study. These items are not reasonably allowed or considered within lead lag studies because they are “non-cash” transactions. These substantive non-cash expenses improperly and significantly overstate the cash working capital required to pay APS’ ongoing, day to day expenses. Removal of non-cash expenses is necessary to comply with previous ACC Decisions addressing this issue, as noted herein.

Q. What is the CWC rate base impact of APS’ inclusion of non-cash items in its lead lag study?

A. Attachment SCC-3 represents a copy of the APS workpaper (i.e., LLR_2, page 10 of 400) supporting the calculation of the $74.8 million increase to rate base associated with these non-cash items, accrual-basis expense items including: nuclear amortization, pension and OPEB, Palo Verde gain amortization, depreciation and amortization, and deferred income tax expense.

Q. Referring to Attachment SCC-3, the Company has assigned a "zero" expense lag day to each of these items. If the assigned expense lag is "zero", why do you believe that the Company has improperly overstated its cash working capital needs?

A. The use of an assumed "zero" expense lag in and of itself is not a problem. However, the Company has employed a study methodology which applies a revenue lag (i.e., 41.81 days per APS' workpaper)[14] to each of these "non-cash" expense items. Consequently, the Company's method results in the assignment of a positive revenue lag (see Column 2) and a "zero" expense lag (see Column 3) to each non-cash item (i.e., lines 6, 17, 25, 31, 32, 33 and 40), thereby improperly overstating CWC by $74.8 million as a result. By including these non-cash items, the Company's approach implies an expansion in the scope of cash working capital to include cash flows related to the construction and depreciation of plant and the accrual and later payment of deferred income taxes.

Assuming that the purpose of a lead/lag study was expanded to track the timing of all cash flows into and out of the utility, the analysis and measurement would encompass all cash transactions, whether related to current period expenses, dividend payouts or construction activity. However, other rate base elements would also require analysis, as construction costs are not typically paid immediately in "cash" – as implied

[14] See Rockenberger Attachment LLR-3.

by an assumed zero expense payment lag for depreciation. APS' proposed expansion of CWC fails to analyze or account for delayed cash outflows in payment of construction costs or the turn-around and payment of deferred taxes and should be rejected.

Q. Why are deferred income tax expenses considered to be non-cash items?

A. Deferred income tax expenses, as the name implies, represent non-cash, deferred accounting transactions. In other words, the Company does not disburse cash in the current year for deferred income tax expenses. Such income tax expenses arise from normalization accounting of tax/ book timing differences that originate in one year and reverse or "turn-around" in other years. Since deferred income taxes are included in revenue requirement and "collected" from ratepayers, but are not currently paid to the taxing authorities, they become a source of cost free capital separately considered in determining rates (i.e., accumulated deferred income tax reserves are recognized as a rate base offset) and need not be financed or provided by investors. Consequently, deferred income taxes do not require or increase the Company's cash working capital requirements – because there are no current period cash outflows.

Deferred income tax expenses are somewhat similar to depreciation expenses: both represent accrued expenses; both expenses are recovered through utility rates; the cumulative recoveries of both expenses

are recognized as zero cost capital and used to reduce rate base; neither of these expenses involve payments to suppliers or vendors; and both expenses provide a source of cash that can be used for investment in plant construction or to support other corporate activity.

Q. Why should non-cash expense items be excluded from a lead lag study?

A. As indicated previously, non-cash expense items represent elements of cost of service that do not require a current period cash payment. Therefore, they do not influence a Company's need for cash working capital, under the commonly used approach to lead lag analysis. Such accrued expense items themselves do not involve issuance of a cash voucher to pay, for example, for depreciation expense.

Thus, non-cash expense items are properly excluded from a lead lag study. Their inclusion would be inconsistent with the widely accepted view of cash working capital as the amount of invested capital required to bridge the gap between the payment of expenses and the collection of related revenues. When there is no expense payment, no cash working capital is required. Depreciation and deferred income tax expenses do not require current period cash payments. Since investors are not required to provide cash advances for these expense items prior to the collection of revenues, it would be improper to include such items in a study of cash working capital requirements.

Q. Why should interest expense be included in Staff's recommended lead/lag study?

A. Interest expenses arise as a direct result of the Company's debt obligations. Each debt issue requires the periodic cash payment of interest expense in known amounts that are due and payable at predetermined points in time (e.g., quarterly or semi-annual interest payments).

In the traditional revenue requirement formula, interest costs are included in the weighted cost of capital that is applied to rate base. Through this ratemaking formula, interest expense becomes as much a part of jurisdictional revenue requirement (i.e., costs borne by ratepayers) as do operating expenses such as fuel and payroll costs. Since the ratemaking process allows recovery of capital costs that include these periodic payments to debt holders and ratepayers pay for utility service on a monthly basis, fairness requires that the lead lag study recognize the Company's use of these interest funds for the extended time period between collection from ratepayers and payout of interest to debt holders.

Q. Should the lead lag study include quarterly common equity dividends, since Staff is proposing to recognize interest expense?

A. No. While I am aware of utility recommendations in other proceedings that have proposed such treatment, common equity cash flows (including common stock dividends) are less certain as to timing and do not represent "cash" expenses. "Net income," from which common dividends are paid, represents the residual equity return remaining for shareholders after all other expenses are deducted from revenues, rendering it comparatively unpredictable in amount. However, CWC recognition of quarterly dividend payments would yield an estimated payment lag in excess of 45 days (i.e., 90 days in calendar quarter divided by two plus additional lag from end of quarter to dividend disbursement date), ignoring the retention of “current” earnings. A presumed “expense” lag over 45 days would exceed the Company's proposed 41.81 day revenue lag, resulting in a negative CWC allowance for common “dividends”. As a result, any recognition of common dividends for lead lag study purposes would further decrease Staff’s proposed “negative” CWC recommendation.

Consistency with Prior ACC Decisions

Q. You previously indicated that non-cash items, including depreciation and deferred income tax expenses, are not reasonably included within lead lag studies. How has the ACC previously treated these non-cash items?

A. While I have not conducted exhaustive research in this area, I am familiar with the Commission's treatment of these items in a number of rate

proceedings dating back to the early 1980's. Attachment SCC-4 contains excerpts from a series of prior ACC decisions concerning lead lag studies and CWC theory. I am not aware of any ACC order adopting the inclusion of non-cash expense as requested by APS in the pending case.

Perhaps of greatest immediate relevance, the Commission specifically excluded non-cash expense items and recognized interest expense in quantifying the CWC allowance adopted in its April 1988 APS rate order (Decision No. 55931):

> The fundamental reason for the difference between APS's calculation and those of the FEA and Staff is the treatment of "non-cash" items, such as deferred taxes and depreciation. Although the argument is somewhat more difficult to follow with respect to deferred taxes (they represent taxes which will be paid in the future), we agree with APS that depreciation accounting represents the return of a cash outlay it made at the time it acquired utility assets. Thus, use of the term "non-cash item" may be a misnomer if read literally. However, neither depreciation nor deferred taxes require the expenditure of cash at the time the expense is recorded and thereby charged to the customers. They are not "current" cash expenses. We have repeatedly rejected the inclusion of deferred taxes and depreciation in the calculation of current cash working capital requirements. We have also finally concluded that interest expense should be included in a lead/lag study, and we have expressly approved the concept of negative cash working capital. E.g., Mountain States Tel. & Tel. Co., Decision No. 54843 (January 10, 1986). Therefore, in this case we have used the Staff's negative cash working capital requirement of ($46,757,000) in our rate base determination.

The Commission has issued numerous orders applying and interpreting the lead lag study approach to cash working capital. Although not

exhaustive in scope, Attachment SCC-4 contains excerpts from ten (10) different ACC decisions that discuss various CWC topics, including non-cash items, interest expense and use of pro forma (i.e., adjusted) operating expenses.

Q. Please summarize the CWC issues in dispute.

A. While Staff has proposed a series of corrections to APS' lead lag study results, the primary factors driving the significant difference (i.e., over $100 million) in the CWC recommendations of Company and Staff fall into three general areas – each of which are consistent with the Commission's longstanding, lead lag study policies:

- Exclude non-cash items (e.g., depreciation and deferred income tax expense);
- Recognize payment lags related to interest expense; and
- Use of pro forma/ adjusted expenses, particularly interest expense and current income tax expense.

2002 SEVERANCE PROGRAM

Q. What is the purpose of Staff Adjustment C-12?

A. During the 2002 test year, APS offered a voluntary severance package to employees and recorded expense of about $33.1 million (before jurisdictional allocation) associated with the 2002 Severance Program offering. In assembling its revenue requirement recommendation, APS

witness Robinson[15] proposed an adjustment to levelize (i.e., amortize) these test year costs over a three-year period.[16] Staff Adjustment C-12 removes the amortization proposed by APS from test year expense.

Q. Could you briefly describe the 2002 Severance Program?

A. In general terms, a voluntary employee retirement program typically offers enhanced benefits to employees nearing or meeting retirement age/ years of service criteria in order to reduce overall staffing levels, by inducing targeted employees to retire earlier than expected. The 2002 Severance Program consisted of two phases: Phase 1 was offered to all employees eligible to retire as of December 31, 2002, while Phase 2 was offered to all employees in positions that would no longer be refilled as a result of that position being vacated.[17] This program was briefly discussed in a press release issued by Pinnacle West on July 23, 2002:[18]

> The Company today also announced cost-containment measures that include a voluntary workforce reduction of 500-600 positions. These reductions will be implemented in the second half of this year and are expected to produce annual operating expense savings of $30-35 million beginning in 2003, and a comparable one-time charge to earnings later in 2002.

According to the Company's response to Staff Data Request No. UTI-8-239, the benefits payable to those eligible employees electing to participate under this plan are different for each phase:

---

15 Robinson direct testimony, pages 31-32.
16 See APS Schedule C-2, page 4, Adjustment 11.
17 See Staff Data Request No. UTI-1-17.

- Phase 1 Benefits: $15,000 lump sum transitional retirement payment; continued medical, dental and group life insurance coverage (during severance period); and severance pay (4 weeks of base pay plus 2 additional weeks of base pay for each year of service, with a maximum of 52 weeks).

- Phase 2 Benefits: continued medical, dental and group life insurance coverage (during severance period); and severance pay (4 weeks of base pay plus 2 additional weeks of base pay for each year of service, with a minimum of 8 weeks and a maximum of 52 weeks).

Q. Has APS recognized any cost savings or benefits resulting from the severance program, such as reduced employee levels, in the quantification of overall revenue requirement?

A. Yes. Company witness Robinson briefly discusses this matter in his direct testimony.[19] In annualizing payroll expense for ratemaking purposes, the Company's original filing employed year-end 2002 employee levels and recognized March 2003 wage rates. The Company's payroll annualization adjustment incorporated all reductions in employee levels that were actually achieved by the end of 2002.

Q. If APS has recognized the lower employee levels in its wage annualization, why have you proposed to eliminate the Company's proposed 2002 Severance Program amortization from pro forma operating expense?

A. APS' proposed amortization of the 2002 Severance Program costs does not represent either the net cost incurred by the Company nor ongoing

[18] The press release is publicly available at http://pinnaclewest.com.

expense levels. Acceptance of the Company's proposed amortization adjustment will improperly overstate the ongoing cost of providing utility service.

Q. Is it your opinion that the 2002 Severance Program should not have been undertaken?

A. No. Staff Adjustment C-12 should not be interpreted in that context. Regulated entities should undertake reasonable steps to reduce and contain costs, while continuing to provide safe and adequate service. While Staff does not contest the decision, or the incurrence of costs, to implement this severance program, Staff does recommend that APS' proposed program cost amortization be excluded from pro forma operating expense.

Q. If APS incurred $33.1 million to implement the severance program, how can the amortization of that amount (i.e., net of the portion recovered from power plant participant owners) misstate the cost of providing utility service?

A. It is true that APS did incur those costs and that the Company has recognized the impact of the resulting decline in employees in quantifying the pro forma payroll annualization adjustment sponsored by Mr. Robinson. Unfortunately, the Company's pro forma adjustment only

[19] Robinson direct testimony, pages 30-31.

provides ratepayers with the benefit of prospective reductions in expense – a benefit that will not be realized until the rates resulting from the pending rate proceeding are fully effective, which is estimated for July 2004.[20] What APS' ratemaking treatment ignores is the savings realized and retained for shareholders until new utility rates are implemented that reflect the lower staffing levels.

While Mr. Robinson has proposed to amortize the 2002 severance costs over a three-year period, the Company's adjustment ignores the offsetting "savings" realized during and subsequent to the test year, but prior to July 2004. Instead, APS would retain all Severance Program "savings" realized during 2002, 2003 and 2004 for the sole benefit of its shareholders, until new rates are implemented in mid-2004, while still recovering the "cost" of this program in future rates – through its three-year amortization proposal.

Q. Does APS concur that the 2002 Severance Program resulted in cost savings during and subsequent to the test year?

A. Yes. In response to Staff Data Request Nos. UTI-1-17, confidential UTI-8-239 and UTI-15-318, APS provided the estimated savings for 2002 and 2003 expected to result from the 2002 Severance Program. Although this information was not presented on a monthly basis, a reasonable allocation

[20] Per the response to Staff Data Request No. UTI-8-243, APS has requested an effective date as close to

of the expected savings for the first six months of 2004 indicates that the severance program costs (before allocation to APS and removal of joint power plant participant owners' share) should be recovered through retained savings by the time rates from the pending rate proceeding are implemented. The following table summarizes that comparative information:

2002 Severance Program
(000's)

Year	Costs		Savings	
2002	$35,691	(a)	$(9,000)	(b)
2003	0		(19,900)	(c)(d)
2004 (Jan-July)	0		(9,950)	(e)
Total	$35,691		$(38,850)	

Sources:
(a) APS workpaper DGR_WP16, p. 2/4 (before non-APS participant share).
(b) APS response to Staff Data Request No. UTI-2-111, includes APS & PWCC.
(c) APS response to Staff Data Request Nos. UTI-1-17 & UTI-8-239 (amounts reflect PWCC O&M budget reductions for 2003).
(d) Excludes "other" savings of $10.1 million per response to Staff Data Request No. UTI-15-318(a).
(e) 2003 $(19,900) annual savings times 6/12^{ths}.

Since the ratemaking process will not recognize any 2002 Severance Program savings realized by the Company prior to July 2004, it would be totally inappropriate to saddle ratepayers with any portion of APS' cost to implement the program in a way that does not recognize the offsetting savings realized during this same interim period. Otherwise, the

July 1, 2004 as possible.

amortization mechanism proposed by APS would provide a one-sided opportunity for the Company to retain all savings realized prior to the implementation of new rates (July 2004) and then explicitly recover all costs incurred during the test year at ratepayer expense.

Q. Is it possible to know with absolute certainty that APS realized $38.85 million of severance related savings during 2002, 2003 and January through July 2004?

A. No. Utilities typically do not implement mechanisms to track the actual "savings" realized as a result of implementing a cost savings program, instead relying on estimated savings analyses. Consequently, no one can know with absolute certainty whether the actual savings realized as of July 2004 will be significantly more or less than $38.85 million. However, as stated in response to Staff Data Request Nos. UTI-1-17 and UTI-2-111: "No formal feasibility studies were done for this program."

There is no question that APS expected to commence realizing benefits or cost savings immediately upon implementation of the 2002 Severance Program. As indicated in the earlier quote from the Pinnacle West press release dated July 23, 2002, the voluntary employee "…reductions will be implemented in the second half of this year and are expected to produce annual savings of $30-35 million beginning in 2003, and a comparable one-time charge to earnings later in 2002."

What is known with absolute certainty is that APS is seeking to amortize its share of the costs associated with implementation of the 2002 Severance Program with no offset for, or recognition of, the significant cost savings that it began realizing as a direct result of that very program and will continue to retain for the benefit of shareholders through July 2004.

Q. Does Staff's recommendation have the effect of assigning all costs of implementing the 2002 Severance Program to APS shareholders, while flowing all savings through to ratepayers?

A. No. With regard to the Company's request to explicitly amortize the 2002 severance implementation costs (i.e., gross of related savings), Staff is recommending that APS be allowed to offset all costs incurred during the test year with the actual savings realized by the Company from the date of program implementation through the effective date of the rate change resulting from the pending rate case. The ratemaking process would then only reflect, on a prospective basis, the normal annualized ongoing level of wages and salaries, payroll taxes, benefit costs, and incentive compensation.

Q. Has APS or Pinnacle West offered other similar workforce reduction or efficiency programs?

A. According to the Company response to Staff Data Request No. UTI-15-322, similar workforce reduction programs have not been offered in recent years, at least dating back to 1997. In the fourth quarter of 2003, APS did implement an involuntary reduction to both the Marketing & Trading and Information Services groups, due to the deteriorating western power market and reductions in capital budget expenditures, respectively.

WAGE & PAYROLL TAX ADJUSTMENT

Q. Please describe Staff Adjustment C-13.

A. Staff Adjustment C-13 revises the Company's pro forma payroll annualization adjustment[21] to reflect actual employee levels and wage rates as of October 2003.

Q. Why should these Company adjustments be revised to recognize actual employee levels and wage rates as of October 2003?

A. As discussed in the direct testimony of APS witness Robinson,[22] the payroll annualization contained in the Company's original filing was based on 2002 year-end employee levels and March 2003 wage rates. In response to Staff discovery,[23] APS indicated that its 2002 Severance Program was a voluntary offering that the Company was required to make available to all similarly-situated employees. Because some employees

[21] See APS Schedule C-2, page 4, Adjustment 10.
[22] See Robinson direct testimony, page 30.
[23] See APS response to Staff Data Request No. UTI-8-241.

were lost that were still needed by APS and would have been retained in the absence of the voluntary nature of that severance program, the Company commenced hiring replacement employees in 2003 to fill those vacancies.

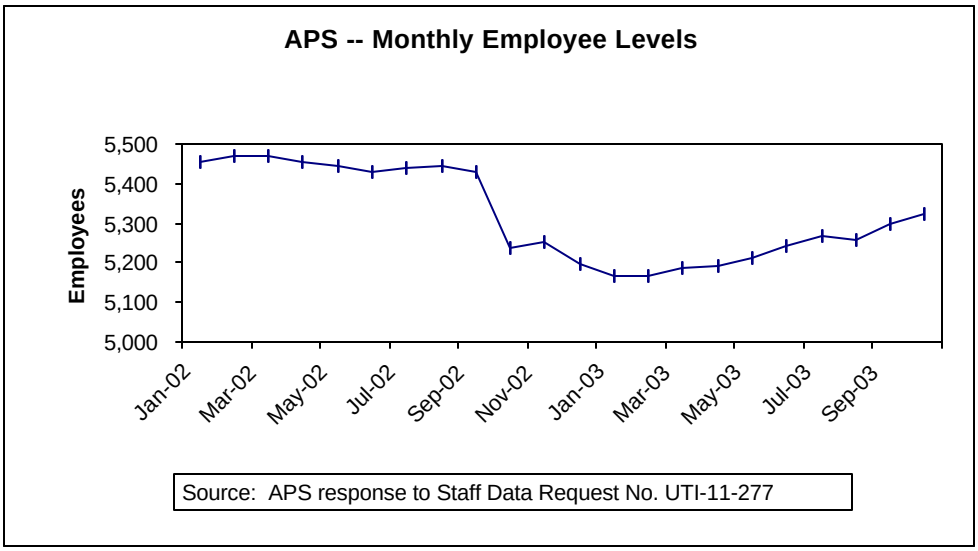
When the 2002 Severance Program was offered, the Company estimated that about 20% of the resulting reduction in workforce would need to be replaced (i.e., hire new employees to fill position vacancies created by certain employees accepting severance). Because an "involuntary" severance program had not been considered, the Company did not perform an evaluation of each employee position to determine the exact number of employees that would have otherwise been retained. However, the month-end employee levels as of October 2003 would reflect APS' success in filling those vacancies.[24] By revising the Company's payroll annualization adjustment to reflect the October 2003 data, pro forma payroll expense will recognize ongoing employee levels at their actual wage rates.

Q. How have employee levels changed during and subsequent to the test year?

A. As part of the Company's original payroll annualization workpapers and through the response to Staff Data Request No. UTI-11-277, APS

[24] See APS response to Staff Data Request No. UTI-15-319.

provided monthly employee counts from January 2002 through October 2003. The following chart graphically illustrates the monthly change in APS (direct) employee levels during this period of time:



Although Staff Adjustment C-13 is based on employee levels at October 2003, the revision to the Company's proposed annualization adjustment still reflects lower headcounts than actually experienced during the test year.

Q. You previously discussed Staff Adjustment C-12, which reversed the Company's proposed amortization of the 2002 Severance Program costs. Is Staff's proposed revision to the APS payroll annualization consistent with the elimination of the severance amortization?

A. Yes. Staff recommends that the Commission deny APS' proposed amortization of the 2002 Severance Program costs, but be allowed to retain all related cost savings realized between program implementation

and the effective date of the Commission's order in the pending rate case proceeding. By modifying the APS payroll adjustment to reflect ongoing employee levels (i.e., as of October 2003), Staff has attempted to ensure that utility rates will not allow ratepayers to inadvertently participate in temporary savings attributable to lower than expected employee levels experienced as of December 2002. Accordingly, APS will be allowed to retain all "interim" savings to offset the severance program implementation costs, with ratepayers only benefiting on a prospective basis.

Q. Are you aware of any additional modifications or corrections at this time that should be made with respect to the Company's wage and payroll tax annualization adjustment?

A. No. I am not aware of any additional changes that should be made at this time.

UNION CONTRACT SIGNING BONUS

Q. Please describe Staff Adjustment C-14.

A. During the test year, APS disbursed certain one-time incentive payments to union employees related to the successful completion of union contract negotiations. IBEW Local 387 ratified the labor agreement effective April 1, 2002.[25] Staff Adjustment C-14 amortizes those incentive payments, or

[25] See APS response to Staff Data Request No. UTI-16-325.

signing bonuses, over the three-year term of the union contract for ratemaking purposes.

Q. Did APS charge the full amount of the incentive payments to expense during the test year?

A. Yes. According to the response to Staff Data Request No. UTI-16-325, the labor agreement provided for an incentive payment for each employee represented by IBEW Local 387 in the amount of $1,009.22. APS recorded the cost associated with this incentive payout in May 2002.

Q. Do you know why the Company did not amortize the cost of the signing bonus over the contract term?

A. Yes. The Company considered the incentive payment to be a "current period obligation and therefore should only be realized in the period in which it occurred."[26]

Q. Why should the signing bonus be amortized over the term of the contract?

A. Typically, a signing bonus may be used as an inducement to expedite the successful completion of contract negotiations. Although such bonuses are often paid in a lump sum at or near contract ratification, the benefits resulting from the successful contract negotiations extend over the entire term of the agreement. Consequently, such incentive payments are

[26] See APS response to Staff Data Request No. UTI-16-325(e).

reasonably apportioned over the term of the contract for regulatory and ratemaking purposes.

Q. If the Company actually made the incentive payments to eligible union employees in 2002, why do you believe that 100% of the cost of those payments should not be included in the 2002 test year?

A. Absent explicit provisions to the contrary, APS will not make similar signing bonus payments each and every year that the contract is in effect. Consequently, a reasonable argument can be made that such signing bonuses, when they occur during a rate case test year, represent non-recurring transactions that could be removed from the ratemaking process – in other words, none of the non-recurring incentive payments would be recognized for ratemaking purposes. However, such an approach would discount the role of the incentive payments in mutually resolving the contract negotiations between the Company and the union. For that reason, Staff has proposed to amortize the signing bonus over a three-year period.

Q. If the Commission does not concur with the three-year amortization proposal, do you have an alternative recommendation on this issue?

A. Yes. While I strongly believe that the amortization approach reasonably balances the considerations and interests of the parties, I also strongly believe that including 100% of the signing bonus in test year expense for

ratemaking purposes, as proposed by APS, is wholly inappropriate. Should the Commission decline to adopt Staff's amortization proposal, I would urge the Commission to remove 100% of the signing bonus from test year expense, as non-recurring transaction costs, rather than include 100% of such one-time costs in the current proceeding and set utility rates as if these costs were annually recurring.

INCENTIVE COMPENSATION

Q. What is the purpose of Staff Adjustment C-15?

A. Staff Adjustment C-15 represents a partial disallowance of test period incentive compensation expenses. Staff proposes to eliminate the costs associated with APS' stock-based incentive compensation, while allowing ratemaking recovery of test period expense associated with the cash-based incentive compensation plans. After Staff's adjustment, the 2002 test period will still include approximately $10.5 million[27] of "cash" incentive compensation expense (before jurisdictional allocation) – providing APS with a conservatively generous recovery of various non-stock based incentive plan costs that are driven by both financial and operational performance measures.

[27] See APS response to Staff Data Request No. UTI-12-298: Document RC 02412 indicates total recorded expenses of $11.056 million, inclusive of $540 thousand PNW allocated costs, but reduced by $515 thousand of A&G credits from shared plant participants.

Q. Please describe the stock-based incentive program Staff is proposing be disallowed from test period expenses.

A. Several types of incentives are provided to executives and directors under certain Long Term Incentive Plans in the form of Pinnacle West common stock, including: Performance Stock Option Awards, Performance Share Awards, Stock Ownership Awards and Restricted Stock grants.[28] These awards resulted in benefits to APS executives and management team members during the test year, resulting in the incurrence of about $3 million of expenses recommended for disallowance by Staff. Additional awards can also be provided to Directors of Pinnacle West and to employees already holding Pinnacle West stock, so as to encourage employee stock ownership. The granting of stock options, or shares, by the Pinnacle West Board of Director's Human Resources Committee was discussed in a December 7, 2001 Memorandum from Bill Post:[29]

> "As we prepare for next year our prevailing philosophy of rewarding performance and aligning our interest with those of our shareholders remains our major focus. We all need to work together and continue the commitment to increase shareholder value and value to our customers. I know I can count on each of you to do just that."

Notably, because they are stock-based, these incentive compensation programs are driven by the financial performance of Pinnacle West, rather than performance criteria directly linked to customer service, employee safety, cost reductions or utility operational achievements.

[28] See APS responses to Staff Data Request Nos. UTI-1-85 and UTI-12-293.

Q. Please describe the cash-based incentive compensation programs that resulted in expenses recorded during the test period, but have not been included in Staff's proposed ratemaking adjustment.

A. In 2002, an annual cash bonus Variable Incentive Plan ("VIP") was effective for Pinnacle West and subsidiary company employees and was composed of two primary components: (1) a Company plan and (2) various Business Unit plans. Cash bonuses payable under the VIP were established for different employee groups in a range of specified percentages relative to salary levels or a bonus pool established for particular groups. The following table generally summarizes plan parameters for various employee groups, with more complex plan details for some groups simply noted as "complex" where plan terms were not conducive to this summarization:

	Company Plan Earnings		Business Unit Plan	
	$ Millions	Payout %	Indicators	Payout %
PNW Incentive Plan	$293-337	0% - 3%	various	0% - 3%
PVNGS Plan	$293-337	0% - 3%	various	various
PNW Shared Services	$293-337	0% - 3%	various	0% - 3%
Management Incentive	$293-337	0% - 7.5%	various	0% - 7.5%
Senior Management	$293-337	0% - 15%	various	0% - 15%
Officer Incentives	$293-337	0% - range	various	various
CEO Plan	$293-337	0% - 200%	none	none
Attorney Incentives	$293-337	0% - 7.5%	various	0% - 7.5%
Power Marketing/Trading	$293-337	complex	complex	complex
Nuclear Safety Plan	$293-337	complex	complex	complex
Nuclear Outage Plan	$293-337	complex	complex	complex
Fossil Incentive Plans	$293-337	complex	complex	complex

Note: If $293 million earnings threshold is met and customer satisfaction per survey indicates >43% "very satisfied" an additional 1% can be added to certain Company Plan payout levels.

[29] See APS response to Staff Data Request No. UTI-1-85, attachment RC00581.

Source: APS response to Staff Data Request No. UTI-1-77.

According to the terms of this plan, the "Company Plan Earnings" component of the 2002 VIP conditioned funding upon Pinnacle West consolidated earnings reaching the $293 million threshold target level, with amounts payable under this portion of the incentive plan driven by the achievement of earnings above the threshold level.[30] The Business Unit Plan component involved the establishment of Critical Success Indicators tailored to the responsibilities and goals of the individual business units, which are simply noted as "various".[31] Examples of Critical Success Indicators generally include: minimization of recordable injuries, achievement of targeted cost levels, equipment reliability and availability target achievements, outage minimizations, and various other operational and financial metrics. However, even the Business Unit incentives were not to be funded unless Pinnacle West achieved the threshold earnings levels in calendar year 2002. In effect, the Company's entire cash-based incentive program is primarily driven by Pinnacle West's attainment of the minimum earnings level.

Q. What amount of incentive compensation expense, for each of the plans and in total, has APS included in its test period revenue requirement?

[30] See APS response to Staff Data Request No. UTI-1-77, attachment RC00585.
[31] See APS response to Staff Data Request No. UTI-1-77, attachment RC00585.

A. APS' proposed test year expense includes approximately $3.2[32] million of stock-based incentive compensation and another $10.5[33] million in cash-based incentive compensation, resulting in total "per books" incentive compensation costs of approximately $13.7 million.[34]

Q. How does the amount of cash-based incentive compensation APS has proposed to recover in this proceeding compare to the amounts incurred during recent years?

A. APS has proposed to include the actual test year level of cash-based incentive compensation in determining overall revenue requirement. The following table compares the Company's proposed level of such cash incentive compensation costs with historical calendar year expense levels provided in response to Staff Data Request No. UTI-8-244:

Period	$ Millions
1999	$ 16.0
2000	$ 15.7
2001	$ 13.2
2002	$ 11.1

[Note: all amounts prior to participant offset credits related to A&G incentives.]

Q. Do these incentive compensation expenses include amounts directly incurred by APS as well as allocations to APS from affiliates?

[32] See APS response to Staff Data Request No. UTI-12-295.
[33] See APS response to Staff Data Request No. UTI-12-298.
[34] Amounts before allocation to regulated retail operations.

A. Yes. However, the amounts shown do not reflect reductions for "participant offset credits" of administrative costs allocable to co-owners of joint generating units, that amounted to about $0.5 million in 2002.

Q. Why is the 2002 level of cash-basis incentive compensation cost lower than prior years?

A. In 2002, Pinnacle West failed to achieve consolidated earnings at the threshold level technically required as a precondition to any funding of cash bonuses. However, this precondition was not strictly applied, according to the Company:

> "The Board determined to pay incentives based on 50% of the individual business unit performance achievement, plus the 1% adder for frontline employees based on achieving the 2002 fourth quarter customer satisfaction survey targeted performance level."

The rationale for this action was explained in a January 23, 2003 letter from Bill Post to all employees, provided in response to Staff Data Request No. UTI-12-299 and appended hereto as Attachment SCC-5.

Q. Why has Staff proposed to allow full recovery of the lower 2002 actual cost of the cash-based incentive plans, while excluding the cost associated with the stock-based incentives in the test period?

A. Even though corporate earnings also serve as a threshold or precondition to the payout of cash-based incentive compensation, the reduced test year cash incentives are tied primarily to performance measures that

directly benefit APS consumers, particularly since test period payouts did not include the Company Plan earnings percentages that were payable in prior years. In contrast, the stock-based incentives are entirely driven by Pinnacle West objectives that, only very indirectly, might benefit consumers.

For example, the targets used to award stock-based incentives under the Performance Shares Plan are based upon Pinnacle West Earnings per Share ("EPS") growth from one year to the next in relation to a comparison group of electric utilities. Comparative EPS growth is not a criteria or element directly considered as a cost component in establishing electric utililty rates. In and of itself, efforts to enhance EPS growth may not be consistent with the interests of utility customers or reasonable pricing for the regulated business, where changes in the level of rate base assets and the cost of capital are more directly relevant to earnings achievable by the utility.

In Staff's view, rate recovery of the reduced test year cash-based incentive compensation is conservatively generous to the Company, where no showing has been made by APS of any customer benefit from either of its discretionary incentive compensation programs.

Q. Should the Commission carefully consider incentive compensation programs and cost levels, in order to balance the interests of utility consumers in reasonable rates with rewards granted to employees for achievements that enhance corporate operational and financial objectives?

A. Yes. Incentive compensation is a method of providing monetary awards to the work force through non-guaranteed or "at risk" cash bonus, or other payment programs, in addition to base wages. According to the Company's response to Staff Data Request No. UTI-12-294: "APS has proposed full inclusion of the compensation paid to APS employees (and the APS-related portion of PWCC employees) in cost-of-service because such compensation is both reasonable and a legitimate cost of doing business independent of how the compensation of specific individual [sic] is calculated and irrespective of the form of the compensation."

Obviously, a decision by management to incur incentive compensation costs is an indication that such costs were viewed as reasonable by the Company, but regulators need not allow above-the-line accounting for all discretionary costs incurred by management absent a showing that such costs provide direct, tangible benefits to ratepayers. In the context of stock-based incentives, the same APS response states:

> "The targets are based on Earnings per Share ('EPS') growth from one year to the next relative to our comparison group. EPS growth as a target is considered by management to encompass virtually all performance measures of the

> Company, most of which are linked to the cost effective provision of reliable regulated services by APS. Additionally, the vast majority of PNW earnings are derived from APS. Therefore, it is an appropriate measure to use for stock based compensation in the revenue requirement calculation."

However, the consolidated earnings of Pinnacle West and the rate of growth in Pinnacle West EPS relative to a peer group is only distantly related to any tangible benefits of direct importance to APS ratepayers. With this in mind, Staff proposes recovery of only the cash-based compensation program costs in the test year, which were largely incurred without regard to financial results, so as to recognize employee rewards for business unit performance.

Q. If the corporation fails to achieve its financial targets, will employees necessarily be required to forego all compensation associated with the incentive plans?

A. No. As indicated by Mr. Post's previously referenced letter,[35] the Company has waived formal plan parameters and judgmentally awarded employee incentive payments, even when financial performance falls below threshold levels.

Q. If employees are unsuccessful in helping APS and PNW achieve the corporate targets or business unit goals, will shareholders be required to forego all benefits associated with the incentive plans?

A. No. Since incentive compensation is "at-risk" to the employee, the amount of such compensation from year to year is not fixed, regular nor even certain to occur. In the event that minimum targets are not met, employees do not receive incentive payments and the amount of incentive compensation included in rates (e.g., $10.5 million recommended for recovery by Staff) would contribute to increasing utility profits. In other words, ratepayers are placed at-risk to fund incentive plan costs regardless of payout, while employees are at-risk because targets might not be achieved for any number of reasons. At the same time, neither the Company nor its shareholders would necessarily be at-risk with respect to the $10.5 million of incentive pay, because the allowed expenses would be recovered through rates, regardless of future payouts.

Q. Has the Company provided any evidence that its overall executive or employee compensation levels would be inadequate to attract and retain human resources in the absence of full recovery of both its cash and stock-based incentive program costs?

A. No. Staff Data Request Nos. UTI-1-77(f) and UTI-12-296 were submitted, in part, to determine whether total salary and bonus compensation levels for Company employees were comparable to market compensation levels. Unfortunately, the response provided by APS contained "percentage"

[35] See Attachment SCC-5.

data, without providing or discussing overall compensation comparisons relevant to an analysis of the incentive programs.

Q. Does this conclude your direct testimony?

A. Yes.

STEVEN C. CARVER
SUMMARY OF QUALIFICATIONS

Education and Experience

I graduated from State Fair Community College where I received an Associate of Arts Degree with an emphasis in Accounting. I also graduated from Central Missouri State University with a Bachelor of Science Degree in Business Administration, majoring in Accounting. Subsequent to the completion of formal education, my entire professional career has been dedicated to public utility investigations, regulatory analysis and consulting.

From 1977 to 1987, I was employed by the Missouri Public Service Commission in various professional auditing positions associated with the regulation of public utilities. In that capacity, I participated in and supervised various accounting compliance and rate case audits (including earnings reviews) of electric, gas and telephone utility companies and was responsible for the submission of expert testimony as a Staff witness.

In October 1979, I was promoted to the position of Accounting Manager of the Kansas City Office of the Commission Staff and assumed supervisory responsibilities for a staff of regulatory auditors, directing numerous rate case audits of large electric, gas and telephone utility companies operating in the State of Missouri. In April 1983, I was promoted by the Commission to the position of Chief Accountant and assumed overall management and policy responsibilities for the Accounting Department, providing guidance and assistance in the technical development of Staff issues in major rate cases and coordinating the general audit and administrative activities of the Department.

During 1986-1987, I was actively involved in a docket established by the Missouri Public Service Commission to investigate the revenue requirement impact of the Tax Reform Act of 1986 on Missouri utilities. In 1986, I prepared the comments of the Missouri Public Service Commission respecting the Proposed Amendment to FAS Statement No. 71 (relating to phase-in plans, plant abandonments, plant cost disallowances, etc.) as well as the Proposed Statement of Financial Accounting Standards for Accounting for Income Taxes. I actively participated in the discussions of a subcommittee responsible for drafting the comments of the National Association of Regulatory Utility Commissioners ("NARUC") on the Proposed Amendment to FAS

Statement No. 71 and subsequently appeared before the Financial Accounting Standards Board with a Missouri Commissioner to present the positions of NARUC and the Missouri Commission.

In July of 1983 and in addition to my duties as Chief Accountant, I was appointed Project Manager of the Commission Staff's construction audits of two nuclear power plants owned by electric utilities regulated by the Missouri Public Service Commission. As Project Manager, I was involved in the staffing and coordination of the construction audits and in the development and preparation of the Staff's audit findings for presentation to the Commission. In this capacity, I coordinated and supervised a matrix organization of Staff accountants, engineers, attorneys and consultants.

Since commencing employment with Utilitech in June 1987, I have conducted revenue requirement and special studies involving various regulated industries (i.e., electric, gas, telephone and water) and have been associated with regulatory projects on behalf of clients in twenty State regulatory jurisdictions.

Previous Expert Testimony

I have continued to appear as an expert witness before the Missouri Public Service Commission on behalf of various clients, including the Commission Staff. I have filed testimony before utility regulatory agencies in Arizona, California, Florida, Hawaii, Kansas, Indiana, Nevada, New Mexico, Oklahoma, Pennsylvania, Utah, and Washington. My previous experience involving major electric company proceedings includes: PSI Energy, Union Electric (now Ameren), Kansas City Power & Light, Missouri Public Service/ UtiliCorp United (now Aquila), Public Service Company of Oklahoma, Oklahoma Gas and Electric, Hawaiian Electric, and Sierra Pacific Power/ Nevada Power.

Exhibit SCC-2 summarizes various regulatory proceedings in which I have filed testimony.

STEVEN C. CARVER
Summary of Previously Filed Testimony
1978 through 2004 (January)

Utility	Jurisdiction	Agency	Docket/Case Number	Party Represented	Year	Areas Addressed
Kansas City Power & Light	Missouri	PSC	ER-78-252	Staff	1978	Rate Base, Operating Income
Gas Service Company	Missouri	PSC	GR-79-114	Staff	1979	Rate Base, Operating Income
United Telephone of Missouri	Missouri	PSC	TO-79-227	Staff	1979	Rate Base, Operating Income, Affiliated Interest
Kansas City Power & Light	Missouri	PSC	ER-80-48	Staff	1980	Operating Income, Fuel Cost
Gas Service Company	Missouri	PSC	GR-80-173	Staff	1980	Operating Income
Southwestern Bell Telephone	Missouri	PSC	TR-80-256	Staff	1980	Operating Income
Missouri Public Service	Missouri	PSC	ER-81-85	Staff	1981	Operating Income
Missouri Public Service	Missouri	PSC	ER-81-154	Staff	1981	Interim Rates
Gas Service Company	Missouri	PSC	GR-81-155	Staff	1981	Operating Income
Gas Service Company	Missouri	PSC	GR-81-257	Staff	1981	Interim Rates
Union Electric Company	Missouri	PSC	ER-82-52	Staff	1982	Operating Income, Fuel Cost
Southwestern bell Telephone	Missouri	PSC	TR-82-199	Staff	1982	Operating Income
Union Electric Company	Missouri	PSC	ER-83-163	Staff	1983	Rate Base, Plant Cancellation Costs
Gas Service Company	Missouri	PSC	GR-83-207	Staff	1983	Interim Rates
Union Electric Company	Missouri	PSC	ER-84-168/ EO-85-17	Staff	1984 1985	Construction Audit, Operating Income

STEVEN C. CARVER
Summary of Previously Filed Testimony
1978 through 2004 (January)

Utility	Jurisdiction	Agency	Docket/Case Number	Party Represented	Year	Areas Addressed
Kansas City Power & Light	Missouri	PSC	ER-85-128/ EO-85-185	Staff	1983 1985	Construction Audit, Rate Base, Operating Income
St. Joseph Light & Power	Missouri	PSC	EC-88-107	Public Counsel	1987	Rate Base, Operating Income
Northern Indiana Public Service	Indiana	IURC	38380	Consumer Counsel	1988	Operating Income
US West Communications	Arizona	ACC	E-1051-88-146	Staff	1989	Rate Base, Operating Income
Dauphin Consol. Water Supply Co.	Pennsylvania	PUC	R-891259	Staff	1989	Rate Base, Operating Income, Rate Design
Southwest Gas Corporation	Arizona	ACC	E-1551-89-102 E-1551-89-103	Staff	1989	Rate Base, Operating Income
Southwestern Bell Telephone	Missouri	PSC	TO-89-56	Public Counsel	1989 1990	Intrastate Cost Accounting Manual
Missouri Public Service	Missouri	PSC	ER-90-101	Public Counsel/ Staff	1990	UtiliCorp United Corporate Structure/ Diversification
City Gas Company	Florida	PSC	891175-GU	Public Counsel	1990	Rate Base, Operating Income, Acquisition Adjustment
Capital City Water Company	Missouri	PSC	WR-90-118	Jefferson City	1991	Rehearing - Water Storage Contract
Southwestern Bell Telephone Company	Oklahoma	OCC	PUD-000662	Attorney General	1991	Rate Base, Operating Income
Public Service of New Mexico	New Mexico	PSC	2437	USEA	1992	Franchise Taxes
Citizens Utilities Company	Arizona	ACC	ER-1032-92-073	Staff	1992 1993	Rate Base, Operating Income
Missouri Public Service Company	Missouri	PSC	ER-93-37	Staff	1993	Accounting Authority Order

STEVEN C. CARVER
Summary of Previously Filed Testimony
1978 through 2004 (January)

Utility	Jurisdiction	Agency	Docket/Case Number	Party Represented	Year	Areas Addressed
Public Service Company of Oklahoma	Oklahoma	OCC	PUD-1342	Staff	1993	Rate Base, Operating Income, Acquisition Adjustment
Hawaiian Electric Company	Hawaii	PUC	7700	Consumer Advocate	1993	Rate Base, Operating Income
US West Communications	Washington	WUTC	UT-930074, 0307	Public Counsel/ TRACER	1994	Sharing Plan Modifications
US West Communications	Arizona	ACC	E-1051-93-183	Staff	1994	Rate Base, Operating Income
PSI Energy, Inc.	Indiana	IURC	39584	Consumer Counselor	1994	Operating Income, Capital Structure
Arkla, a Division of NORAM Energy	Oklahoma	OCC	PUD-940000354	Attorney General	1994	Rate Base, Operating Income
Kauai Electric Division of Citizens Utilities Company	Hawaii	PUC	94-0097	Consumer Advocate	1995	Hurricane Iniki Storm Damage Restoration
Oklahoma Natural Gas Company	Oklahoma	OCC	PUD-940000477	Attorney General	1995	Rate Base, Operating Income
US West Communications	Washington	WUTC	UT-950200	Attorney General/ TRACER	1995	Rate Base, Operating Income
PSI Energy, Inc.	Indiana	IURC	40003	Consumer Counselor	1995	Rate Base, Operating Income
GTE Hawaiian Tel; Kauai Electric - Citizens Utilities Co.; Hawaiian Electric Co.; Hawaii Electric Light Co.; Maui Electric Company	Hawaii	PUC	PUC 95-0051	Consumer Advocate	1996	Self-Insured Property Damage Reserve

STEVEN C. CARVER
Summary of Previously Filed Testimony
1978 through 2004 (January)

Utility	Jurisdiction	Agency	Docket/Case Number	Party Represented	Year	Areas Addressed
GTE Hawaiian Telephone Co., Inc.	Hawaii	PUC	PUC 94-0298	Consumer Advocate	1996	Rate Base, Operating Income
Oklahoma Gas and Electric Company	Oklahoma	OCC	PUD-960000116	Attorney General	1996	Rate Base, Operating Income
Public Service Company	Oklahoma	OCC	PUB-0000214	Attorney General	1997	Rate Base, Operating Income
Arizona Telephone Company (TDS)	Arizona	ACC	U-2063-97-329	Staff	1997	Rate Base, Operating Income, Affiliate Transactions
US West Communications	Utah	UPSC	97-049-08	Committee of Consumer Services	1997	Rate Base, Operating Income
Missouri Gas Energy	Missouri	PSC	GR-98-140	Public Counsel	1998	Revenues, Uncollectibles
Sierra Pacific Power Company	Nevada	PUCN	98-4062 98-4063	Utility Consumers Advocate	1999	Sharing Plan
Hawaii Electric Light Co., Power Purchase Agreement (Encogen)	Hawaii	PUC	PUC 98-0013	Consumer Advocate	1999	Keahole CT-4/CT-5 AFUDC, Avoided Cost
Kansas City Power & Light Company	Missouri	MoPSC	EC-99-553	GST Steel Company	1999	Complaint Investigation
US West Communications	New Mexico	NM PRC	3008	PRC Staff	2000	Rate Base, Operating Income
Hawaii Electric Light Company	Hawaii	PUC	PUC 99-0207	Consumer Advocate	2000	Keahole pre-PSD Common Facilities
US West/ Qwest Communications	Arizona	ACC	T-1051B-99-105	Staff	2000	Rate Base, Operating Income
The Gas Company	Hawaii	PUC	00-0309	Consumer Advocate	2001	Rate Base, Operating Income, Nonreg Svcs.

STEVEN C. CARVER
Summary of Previously Filed Testimony
1978 through 2004 (January)

Utility	Jurisdiction	Agency	Docket/Case Number	Party Represented	Year	Areas Addressed
Craw-Kan Telephone Cooperative, Inc.	Kansas	KCC	01-CRKT-713-AUD	KCC Staff	2001	Rate Base, Operating Income
Home Telephone Company, Inc.	Kansas	KCC	02-HOMT-209-AUD	KCC Staff	2002	Rate Base, Operating Income
Wilson Telephone Company, Inc.	Kansas	KCC	02-WLST-210-AUD	KCC Staff	2002	Rate Base, Operating Income
SBC Pacific Bell	California	PUC	01-09-001 / 01-09-002	Office of Ratepayer Advocate	2002	New Regulatory Framework / Earnings Sharing Investigation
JBN Telephone Company	Kansas	KCC	02-JBNT-846-AUD	KCC Staff	2002	Rate Base, Operating Income
Kerman Telephone Company	California	PUC	02-01-004	Office of Ratepayer Advocate	2002	General Rate Case, Affiliate Lease, Nonregulated Transactions
S&A Telephone Company	Kansas	KCC	03-S&AT-160-AUD	KCC Staff	2003	Rate Base, Operating Income, Nonreg Alloc
PSI Energy, Inc.	Indiana	IURC	42359	Consumer Counselor	2003	Rate Base, Operating Income, Nonreg Alloc
Arizona Public Service Company	Arizona	ACC	E-10345A-03-0437	ACC Staff	2004	Rate Base, Operating Income